REDACTED VERSION OF EXHIBIT 4 SOUGHT TO BE FILED UNDER SEAL

From: Sasha Zbrozek ███████████████████████

To: Shana Stanton ███████████████

Sent: Wed, 22 Feb 2017 13:49:40 -0800

Subject: Re: [URGENT] File Downloads [privileged&confidential]

Cc: Gary Brown ████████████████████████ n>, "Thomas E. Gorman" <TGorman@kvn.com>, Raquel Small-Weikert <████████████, Kristinn Gudjonsson ████████████████, Pierre-yves Droz ████████████ n>, Tom Lue ████████████████>, James Judah <jamesjudah@quinnemanuel.com>, Jordan Jaffe <jordanjaffe@quinnemanuel.com>, Melissa Baily <melissabaily@quinnemanuel.com>

svn_instructions.pdf

Typical SVN installation flow attached.

On Wed, Feb 22, 2017 at 1:20 PM, Sasha Zbrozek <████████████████> wrote:

> On Wed, Feb 22, 2017 at 12:27 PM, Shana Stanton <████████████████> wrote:
>
>> +James, Jordan & Melissa
>> Perfect, thanks.
>
> Sasha, we want to also be able to say that SVN contains only internal confidential stuff, which I understand from Pierre is the case.
>
>> Mostly. There's a bit of boilerplate and low-value stuff. There are representations of standard components, lists of public part numbers from distributors, some open-source stuff, and some random doodads that nobody cares at all about - all not a large fraction of the total.
>
>
>> Earlier you said: "4486 files (2022953160 bytes) are from the laser subdirectory" - just wanted to be clear about the significance of that. What other directories are represented here?
>
>> The laser subdirectory is where the laser team stores their design files. There may be some straggling (or old) laser stuff in other folders (and vice-versa), but not much.
>
> Other teams store things in other subdirectories. Radar, for example, has their own subdirectory. Have you looked at the tree?
>
>
>> On Wed, Feb 22, 2017 at 12:15 PM, Gary Brown <████████████████████> wrote:
>
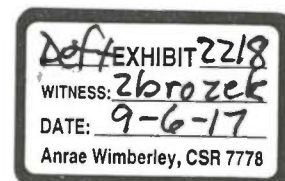>> Confirmed.
>>
>> **file counts**
>> ```
>> $ cat anthonyl.log |grep -oP 'GET\ \S+\ HTTP.1.1.\ 200\ \d+'|sort|uniq|wc -l
>> 14107
>> $ cat anthonyl.log |grep -oP 'GET\ \S+\ HTTP.1.1.\ 200\ \d+'|sort|uniq|grep -i laser|wc -l
>> 4486
>> ```
>>
>> **sizes**
>> ```
>> $ cat anthonyl.log |grep -oP 'GET\ \S+\ HTTP.1.1.\ 200\ \d+'|sort|uniq|cut -f 5 -d \ |paste -sd+ - | bc
>> 9742562821
>> $ cat anthonyl.log |grep -oP 'GET\ \S+\ HTTP.1.1.\ 200\ \d+'|sort|uniq|grep -i laser|cut -f 5 -d \ |paste -sd+ - | bc
>> 2026549560
>> ```
>>
>> On Wed, Feb 22, 2017 at 11:57 AM Thomas E. Gorman <TGorman@kvn.com> wrote:
>>
>>> https://drive.google.com/open?i██████████████████████
>>>
>>> **From:** Gary Brown [mailto █████████████████
>>> **Sent:** Wednesday, February 22, 2017 11:56 AM

EXHIBIT 2218
WITNESS: Zbrozek
DATE: 9-6-17
Anrae Wimberley, CSR 7778

To: Shana Stanton; Sasha Zbrozek
Cc: Thomas E. Gorman; Raquel Small-Weikert; Kristinn Gudjonsson; Pierre-yves Droz; Tom Lue

Subject: Re: [URGENT] File Downloads [privileged&confidential]

Where does that log file reside? I'll take a crack and confirm.

On Wed, Feb 22, 2017 at 11:28 AM Shana Stanton < ███████████ > wrote:

Gary/Kristinn- help please?

On Wed, Feb 22, 2017 at 11:22 AM, Sasha Zbrozek ███████████ wrote:

I have no experience with trying to distill evidence from logs, so I don't know.

On Wed, Feb 22, 2017 at 11:21 AM, Shana Stanton < ███████████ > wrote:

Thank you Sasha, very helpful. Who can help double check the log analysis?

On Wed, Feb 22, 2017 at 11:12 AM, Sasha Zbrozek < ███████████ > wrote:

I generally don't do logs analysis for a living, so I wouldn't mind someone double checking my procedure. But here's what I did:

count of total files:

```
cat anthonyl.log | grep -i get >> anthonyl-allfiles.log

wc -l anthonyl-allfiles.log
```

count of laser files:

```
cat anthonyl.log | grep -i get | grep -i laser >> anthonyl-laserfiles.log

wc -l anthonyl-laserfiles.log
```

Filesizes were a little more complicated. I used a text editor to remove all non-filesize text from each of the files produced above by matching against these two regular expressions:

```
"-".*

.*200
```

and deleting the results.

Then I fed the results into calculator to get totals:

```
awk '{s+=$1} END {print s}' anthonyl-allfiles.log

awk '{s+=$1} END {print s}' anthonyl-laserfiles.log
```

On Wed, Feb 22, 2017 at 10:41 AM, Shana Stanton <███████████████> wrote:

p.s.: and Sasha your method for verifying this is solid enough that if we needed testimony from you, you could explain how we did and feel confident in accuracy?

On Wed, Feb 22, 2017 at 10:35 AM, Shana Stanton <███████████████> wrote:

Amazing- thank you for the quick turn around.

On Wed, Feb 22, 2017 at 10:20 AM, Sasha Zbrozek <███████████████> wrote:

14107 total files (9742562821 bytes) downloaded

4486 files (2022953160 bytes) are from the laser subdirectory

On Wed, Feb 22, 2017 at 8:51 AM, Shana Stanton <███████████████> wrote:

To answer Sasha's earlier question: yes, I need someone to parse the log snippets to answer the questions posed ASAP this AM. These are super important facts that we need to vet today.

Sasha, this exercise has no relevance to the normal day to day actions taken by engineers. Tom Lue and I will be happy to explain further, but in short we are looking at suspicious actions taken immediately prior to departure. This is a very sensitive matter so please do not share outside of the group on this thread. Thank you!

Gary/Shasha- I would like to dig in further today on the patter/record of activity by this particular user.

On Wed, Feb 22, 2017 at 8:33 AM, Gary Brown <████████████████████> wrote:

I ask because we have machine logs going back a few years, and I'm curious as to what other apps I should be looking for.

On Wed, Feb 22, 2017, 08:25 Sasha Zbrozek <███████████████> wrote:

Typically yes, though some folks preferred the command line utilities and some liked the CAD tool's compiled-in flavor. The logs will look more-or-less the same regardless of the client.

On Wed, Feb 22, 2017 at 8:23 AM, Gary Brown <████████████████████> wrote:

Hey Sasha,

Were those systems interacted with in the same fashion (tortoisesvn)?

On Wed, Feb 22, 2017 at 8:20 AM Sasha Zbrozek ‹███████████› wrote:

On Wed, Feb 22, 2017 at 7:39 AM, Shana Stanton ‹███████████› wrote:

All:

We urgently need someone to **run down these facts today ASAP**. It is critical that we confirm:

1) # of files in the download

2) #GBs

Who can do this?

Well, Anthony's log speaks to the number of files. It also expresses the (rough) filesize for each transaction. Figuring out the totals for both can be done by parsing the log snippet. Do you need assistance with that? I'm a little leery because both of those numbers aren't really meaningful to any narrative. It also has a chilling effect on being a hardware engineer - we all do full checkouts, and it makes me uncomfortable to think that lawyers are trying to ascribe suspicion to it.

Sasha: the issue here is that this particular user had not done this before, at least as far as our logs records show (~5months I think) and the timing of this action 6 weeks prior to departure is suspicious. **Who can help me vet whether our views on this have a solid foundation?** In other words, is there any way we can vet today whether this user had ever installed this software and accessed this system, or are we left with only 5 months of info?

This system's logs are only as old as you see. There was a predecessor system hosted on ████████████. I have no log visibility there, but some might exist. Before that (2012?) we had a ████████████ ████████ Everything from then is probably long gone.

--

Shana Stanton| Senior Litigation Counsel | Google Inc.

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Our Team > SDS Electrical Engineering >

Altium Subversion Use & Maintenance

Introduction

Altium, our electronics design tool, allows for some primitive integration with Subversion (SVN) for revision control. This is primarily useful for component library distribution and synchronization among multiple designers. For instructions on how to set up Altium, go here.

Connecting to SVN

1. ███████████████████████████████████████
2. Download and install TortoiseSVN
3. Pick a place in your filesystem in to which to check out the repository. Be aware that ████████ will be created as a subfolder in that location. Placing it in your root, "C:\", works pretty well.
4. Right click, select "SVN Checkout..." and enter ███

Collaboration workflow

Unfortunately Altium's support for SVN is fairly skin-deep. While it supports commits, updates, checkouts, and even binary diff on certain files, it does not support binary merge. As a result, we will have to use the "lock, modify, commit" approach.

1. Lock the relevant files in the master copy.
2. Edit and save all of your modified files, including the .libpkg file, and recompile the integrated library. Save it as well.
3. Commit your versions of the files. This unlocks the files at the same time.

Note that the master library files are currently flagged with the property svn:needs-lock. This means that the files are set to read-only when they are not locked in the current working copy. Altium will not let you save changes to the file until you acquire a lock.